WHAT IS CLAIMED

1. A method for enabling an integrated access device (IAD) to conduct packetized voice and data communications via a digital telecommunications network, comprising the steps of:

(a) conducting an automated communication property analysis of said telecommunication network to identify a communication interface providing access to said telecommunications network; and

(b) automatically configuring communication parameters of said IAD for communication compatibility with said communication interface identified in step (a).

2. The method according to claim 1, wherein step (a) comprises conducting an automated communication property analysis of said telecommunication network to determine a digital transport encoding format for said communication interface, and identifying said communication interface in accordance with information representative of said digital transport encoding format.

3. The method according to claim 1, wherein step (a) includes conducting a first automated communication property analysis of said telecommunication network to determine said digital transport encoding format and, using information representative of said digital transport encoding format, conducting a second automated

communication property analysis of said telecommunication network to detect access to a wide area network.

4. The method according to claim 3, wherein step (a) further includes using information representative of said digital transport encoding format and said communication interface to conduct a third automated communication property analysis of said telecommunication network to detect access to a public switched telephone network (PSTN).

5. The method according to claim 4, wherein step (a) further includes determining voice transport protocol associated with said access to a PSTN.

6. The method according to claim 4, wherein step (a) further includes determining prescribed parameters associated with said access to a PSTN, including at least one of virtual circuit address, number of voice ports, and port signaling.

7. The method according to claim 3, wherein said first automated communication property analysis includes determining line rate, and digital transport encoding format in accordance with information representative of said line rate.

8. The method according to claim 7, wherein said first automated communication property analysis includes determining line rate in accordance with one or both of a priori known line rate negotiation or a testing of all possible line rates.

9. The method according to claim 1, wherein said digital transport encoding format corresponds to a format of one of high level data link control (HDLC) protocol, asynchronous transfer mode (ATM) protocol, or customized ATM protocol.

10. An apparatus for enabling a customer of a communication service provider to conduct packetized voice and data communications over communication interface circuits of a digital communications link, that is coupled in circuit with a digital communications switch of a telecommunications network, said apparatus comprising:

an integrated access device (IAD) adapted for installation at a customer premises, and being connectable with said digital communications link and voice/data equipment at said customer premises, said integrated access device, when configured for operation with said communication interface circuits, being operative to conduct packetized voice and data communications between said voice/data equipment and said digital communications switch by way of said

communication interface circuits of said digital communications link; and

a communications controller for said integrated access device, which is programmed to perform an automated analysis of said digital communications link to identify said communication interface circuits, and to automatically configure communication parameters of said IAD for communication compatibility with said communication interface circuits identified in said analysis.

11. The apparatus according to claim 10, wherein said communications controller is programmed to perform an automated communication property analysis of said communication link to determine a digital transport encoding format for a communication interface circuit providing access to a wide area network, and to identify a communication interface providing access to a public switched telephone network (PSTN) in accordance with information representative of said digital transport encoding format for said communication interface circuit providing access to a wide area network.

12. The apparatus according to claim 10, wherein said communications controller is programmed to perform a first automated communication property analysis of said communications link to determine said digital transport encoding format and, using information representative of

said digital transport encoding format, to perform a second automated communication property analysis of said communications link to identify said communication interface providing access to a wide area network.

13. The apparatus according to claim 12, wherein said communications controller is programmed to perform a third automated communication property analysis of said communications link to determine said voice gateway, in accordance with information representative of said digital transport encoding format and said communication interface providing access to a wide area network.

14. The apparatus according to claim 13, wherein said communications controller is programmed to determine voice transport protocol associated with said communication interface providing access to a PSTN.

15. The apparatus according to claim 13, wherein said communications controller is programmed to identify prescribed parameters associated with said communication interface providing access to a PSTN, including at least one of virtual circuit address, number of voice ports, and port signaling.

16. The apparatus according to claim 12, wherein said first automated communication property analysis

includes determining line rate, and digital transport encoding format in accordance with information representative of said line rate.

17. The apparatus according to claim 16, wherein said first automated communication property analysis includes determining line rate in accordance with one or both of a priori known line rate negotiation or a testing of all possible line rates.

18. The apparatus according to claim 10, wherein said digital transport encoding format corresponds to a format of one of high level data link control (HDLC) protocol, asynchronous transfer mode (ATM) protocol, or customized ATM protocol.